

RESIN INFUSION MOLD TOOL SYSTEM AND VACUUM ASSISTED RESIN TRANSFER MOLDING WITH SUBSEQUENT PRESSURE BLEED

ABSTRACT OF THE DISCLOSURE

A resin infusion mold tool system for use in a vacuum assisted resin transfer molding process with a subsequent pressure bleed step. The mold tool system includes a mold assembly having an outer mold line tool connected to resin supply lines and supplying resin to the preform. A plurality of inner mold line tools form a hard interface with the inner mold line of the fiber preform and are held to within tight tolerances by an external locating fixture. Excess resin is drawn out of the fiber preform using a vacuum bag connected to vacuum lines and disposed over the inner mold line tools but not between the tools and the fiber preform. The mold assembly is placed in an autoclave, the resin supply lines are detached and the autoclave pressurized to bleed additional resin out of the preform to raise the fiber volume of the composite structure.